

## REPORT

# Phase 2 - Dove's Nest Farm Protected Species Management Plan - Bats

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HASKONINGDHV UK LTD.

Rightwell House  
Rightwell East  
Bretton  
Peterborough  
PE3 8DW  
Industry & Buildings  
VAT registration number: 792428892

T  
F  
E  
W  
royalhaskoningdhv.com

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Author(s): Carina Agnew and Maria Walentek

Drafted by: Carina Agnew and Maria Walentek

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Checked by: Claire Smith

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Approved by: Matthew Hunt

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## 1 Introduction

1.1.1 In 2014 a planning application (reference NYM/2014/0676/MEIA) was submitted to North York Moors National Park Authority (NYMNP) for permission to develop a potash mine, underground Mineral Transport System (MTS) and Materials Handling Facility (MHF). Planning consent was subsequently granted in 2015 subject to conditions.

1.1.2 This document has been prepared on behalf of Sirius Minerals plc (Sirius Minerals) and details a Protected Species Management Plan (PSMP) for bats for the Phase 2 (see Paragraph 1.1.4 below) Works at Dove's Nest Farm. This document is required to partially satisfy the requirements of condition 52 of NYMNP planning permission NYM/2014/0676/MEIA. It has been prepared in accordance with current good practice and in line with all relevant environmental legislation. This planning condition states that:

Table 1.1: Condition NYMNP-52 Protected Species Management Plan - Bats

Condition	Compliance with Condition NYMNP-52
Protected Species Management Plans (PSMPs) shall be submitted to the MPA [Mineral Planning Authority] prior to the commencement of Preparatory Works which shall not commence until the PSMPs have been agreed in writing by the MPA	This document for bats during the Phase 2 works and is ongoing throughout Phase 2.
The agreed details shall subsequently be followed unless modifications are agreed in writing with the MPA.	
The PSMPs may establish a programme of submissions to the MPA such that details are approved prior to works affecting different species and areas of the sites, shall concern protected species affected directly by works at the Dove's Nest Farm and Lady Cross Plantation sites, shall detail minimum requirements for mitigating or compensating for effects on protected species, shall require all licences that may be required in respect of effects on or re-location of protected species and their habitat to be obtained and complied with, and shall include but not be limited to consideration of the following <ul style="list-style-type: none"> <li>a. Bats (all species)</li> <li>b. Badger</li> <li>c. Adder</li> <li>d. Common lizard particularly at western side of Lady Cross Plantation</li> <li>e. Other protected reptiles</li> <li>f. Water vole</li> <li>g. Common Crossbill</li> <li>h. Goshawk</li> </ul>	This PSMP relates to bats only.

1.1.3 The Phase 2 Works comprise the following:

- General site clearance including tree clearance for the welfare road and scrub clearance, as shown on drawing **YP-P10-DNF-CX-009**.
- Construction of an acoustic fence/environmental barrier and installation of fencing, gates and security, as shown on drawing **YP-P10-DNF-CX-004**.
- Excavation and construction of the two tiered working platform with a western upper level at around 204m Above Ordnance Data (AOD) and an eastern lower level at around 200m AOD, as shown on drawing **YP-P10-DNF-CX-004**.
- Excavation and construction of the site roads, as shown on drawing **YP-P10-DNF-CX-004**.

- Construction of temporary and permanent soil mound including the environmental screening bund (Bund A) along the western boundary, as shown on drawing **YP-P10-DNF-CX-010**.
  - Construction of surface water drainage, silt removal facility and an attenuation pond with outfalls to an existing drain, as shown on drawing **YP-P10-DNF-CD-001**.
  - Construction of a site compound to the east of the welfare access road.
- 1.1.4 The Phase 2 Works are proposed to start in Q2 2017. **Drawing YP-P10-DNF-CX-004** shows the details of these works at the Dove's Nest Farm site.
- 1.1.5 This PSMP provides the necessary information relating to bats to guide working practices on site during the Phase 2 Works. This Plan, together with similar PSMPs for badger (b.), reptiles (c. and e.) and birds (g. and h.), provides a suite of documents containing the information required by Planning Condition 52 to partially discharge this condition as it relates to the scope of the Phase 2 works. A PSMP has not been provided for water vole (f.) as the ecological surveys undertaken to date have confirmed their absence. This approach has been discussed and agreed with NYMNP and Natural England.
- 1.1.6 Survey findings to date confirm that no other protected species are present on site and further PSMPs are not necessary. This has been confirmed by the NYMNP. Should additional species subsequently be identified, the 'precautionary method of working' would apply and additional plans can be prepared as necessary.

## 2 Legislation afforded to bats

2.1.1 **Table 2.1** provides a summary of the relevant legislation afforded to bats.

Table 2-1 *Summary of legislation afforded to bats*

Species	Legislation (England)	Offences	Licensing procedures and guidance (England)
Bats European protected species	Conservation of Habitats and Species Regulations 2010 (as amended) Reg 41	Deliberately <sup>1</sup> capture, injure or kill a bat; deliberate disturbance <sup>2</sup> of bats; or damage or destruction of a breeding site or resting place used by a bat  (The protection of bat roosts is considered to apply regardless of whether bats are present)	A Natural England (NE) licence in respect of development is required in England if a roost will be affected by the proposed works.
	Wildlife and Countryside Act 1981 (as amended) S.9	Intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection or disturb <sup>3</sup> a bat in such a place	Licence from NE is required for surveys (scientific purposes) that would involve disturbance of bats or entering a known or suspected roost site.

## 3 Surveys undertaken to date

### 3.1 Dusk (emergence), dawn (re-entry) and transect surveys

3.1.1 A preliminary daytime walkover survey of Dove's Nest Farm was undertaken by Paul Chester & Associates (PCA) in 2014. Details of the findings of this survey are provided in the ES/SEI. In summary, this survey assessed the quality of the habitats for bats and included the identification of key potential foraging habitats, flight corridors and the potential for, or confirmed presence of, bat roosting sites. Further bat surveys (i.e. dusk and dawn surveys and monthly activity transect surveys) were carried out between May and September 2012 and 2014 in accordance with industry guidance at that time (i.e. Bat Conservation Trust, 2012, English Nature, 2004 and the Bat Mitigation Guidelines IN136, Natural England, 2006). Details are contained in the ES/SEI and are summarised in **Section 4.1** of this document.

### 3.2 Static detector and evening capture survey

3.2.1 The 2012/2014 emergence/re-entry bat surveys identified bats emerging from a gap between the brickwork and boarding of the flat roofed sections of the dormer windows located on the western side of the main Dove's Nest Farmhouse building. The farmhouse was therefore confirmed as a

<sup>1</sup> Deliberate capture or killing is taken to include "accepting the possibility" of such capture or killing

<sup>2</sup> Deliberate disturbance of animals includes in particular any disturbance which is likely a) to impair their ability (i) to survive, to breed or reproduce, or to rear or nurture their young, or (ii) in the case of animals of hibernating or migratory species, to hibernate or migrate; or b) to affect significantly the local distribution or abundance of the species to which they belong.

<sup>3</sup> Lower levels of disturbance not covered by The Conservation of Habitats and Species Regulations 2010 remain an offence under the Wildlife and Countryside Act 1981 although a defence is available where such actions are the incidental result of a lawful activity that could not reasonably be avoided.

summer roosting site, with the potential to also be a maternity roosting site due to the number of bats recorded during in the summer (i.e. peak numbers recorded in June and July). In order to confirm this conclusion, further bat surveys were undertaken using a combination of automated bat detectors (e.g. Anabat) and suitably positioned observers.

- 3.2.2 Further surveying failed to confirm whether it was a maternity roosting site, and therefore a mist netting survey was carried out (by a suitably qualified ecologist) in August 2015 to determine bat population age structure and correctly classify the roost. Full details of this survey and its findings are reported separately (EcoSurv, 2015) and summarised in **Section 4** of this document.

## 4 Key survey findings

### 4.1 Dusk (emergence) and dawn (re-entry) surveys

- 4.1.1 The 2014 preliminary daytime inspection of the Main Farmhouse at Dove's Nest Farm noted the building to be in good condition and of traditional stone construction, with a pitched pan tile roof. The building was noted to originally be a single storey dwelling although it has since had the loft converted. No evidence of bats was recorded during the 2014 internal/external survey, however communication with the previous owners of the Mine site had reported a small number of bats (likely to be 1-3 individuals) as being present. Consequently a suite of dusk/dawn surveys were undertaken between April and September 2014. Bats were noted to emerge from a gap between the brickwork and boarding of the flat roofed section of the dormer window at the front of the Main Farmhouse. It was therefore confirmed that a bat roost was present within this structure, although the nature and status was yet to be determined but it was envisaged to be a common pipistrelle maternity roost.

### 4.2 Activity transect surveys

- 4.2.1 The suite of 2014 monthly activity transect surveys recorded bat activity at a number of locations within Dove's Nest Farm, particularly along the boundaries where it connects within the wider area. The dominant species being common pipistrelle *Pipistrellus pipistrellus*, although occasional brown long-eared *Plecotus auritus* and Daubenton's *Myotis daubentonii* bats were also recorded.

### 4.3 Static detector and evening capture survey

- 4.3.1 The surveys undertaken at the beginning of the 2015 bat breeding season identified (by the field surveyor) a maximum occupancy of the confirmed roost of 16 individual bats. These were confirmed to be common pipistrelles by the recorded sonograms from the static detectors.
- 4.3.2 A single evening capture exercise (scope and methodology of which was agreed with NE and NYMNP ecologist) utilising a static hand net was undertaken on 10th August 2015. Bats were observed exiting the roost site from 21:20, approximately 30 minutes after sunset. The first two bats were allowed to exit. The subsequent bat to emerge was captured in the net and identified as a juvenile male common pipistrelle bat. The presence of this young bat, along with the time of year of the survey and the surveyor's experience, is considered to provide conclusive proof that this structure is a maternity roost for common pipistrelle bats (EcoSurv Ltd, 2015).

## 5 Mitigation

### 5.1 Demolition of buildings

5.1.1 The Phase 2 Works at Doves' Nest Farm does not require any building demolition and therefore the confirmed bat roost will not be destroyed.

### 5.2 Good practice measures

5.2.1 The following measures will be adhered to during all of the Phase 2 works within and around the Main Farmhouse area to safeguard the protection of bats. These are:

- All staff working on site will be required to attend a tool box talk about the potential presence of bats. Elements of this will include what constitutes signs of bat presence, the probable location of bats if present, their legal status and the penalties should a contractor or his agent deliberately injure or kill a bat.
- An exclusion zone in which no works will be undertaken to prevent disturbance to bats has been identified (see **Figure 1**).
- Whilst night working is not anticipated, any construction lighting will be directed away from the Main Farmhouse and from the bat exclusion zone. All of the lighting requirements for the proposed works will be designed in accordance with guidance from the BCT's Interim Guidance Note on Artificial Lighting and Wildlife (BCT, 2014).

Figure 1 Bat exclusion zone



Image based on Sirius Minerals LiDAR data - no licence required ©Sirius Minerals plc



## 6 Summary

- 6.1.1 A suite of bat surveys have been undertaken during 2014 and 2015 and the findings of which have confirmed a common pipistrelle maternity roost within the Main Farmhouse at Dove's Nest Farm.
- 6.1.2 The demolition of Dove's Nest Farm will not be undertaken as part of the Phase 2 Works. Therefore the confirmed bat roost will not be lost as a result of the proposed works. However indirect impacts to the roost site may arise due to Dove's Nest Farm being used as the site compound area. Therefore good practice measures will be implemented to minimise these potential impact to bats. The measures that will be employed at Dove's Nest Farm are summarised below.
- Tool box talks will be provided to all site personnel prior to the commencement of any works.
  - No works will be undertaken within the area denoted in the bat exclusion zone.
  - The lighting requirements for the Phase 2 Works will be designed in accordance with guidance from the BCT's Interim Guidance Note on Artificial Lighting and Wildlife (BCT, 2014).
- 6.1.3 It is considered that through implementation of the mitigation measures outlined in this document, the site will be managed to ensure bats and their protection and in turn compliance with the legislation afforded to them.

## 7 References

Bat Conservation Trust (BCT), 2014. Artificial lighting and wildlife. Interim Guidance: Recommendations to help minimise the impact artificial lighting.

Bat Conservation Trust (2016). Bat Surveys good practice guidelines, 3rd Edition.

EcoSurv Ltd (2015) Bat Hand-netting at Dove's Nest Farm to Confirm Roost Status, August 2015

English Nature (2004) Bat mitigation guidelines.

Natural England (2006) IN136 Bat Mitigation Guidelines Advice Note.

Royal HaskoningDHV (2014) York Potash Project Mine, MTS and MHF Environmental Statement, September 2014

Royal HaskoningDHV (2015) York Potash Project Mine, MTS and MHF Environmental Statement: Supplementary Environmental Information, February 2015